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thereby forming a funnel-shaped opening, wherein the funnel-shaped opening comprises forming a funnel slope of about 30° to about 45° relative to a major surface of the substrate; and forming a gate electrode in the funnel-shaped opening.

8. The method of claim 7, wherein the removing comprises:

performing a first etch process, the first etch process removing the one or more first dielectric layers at a first rate; and

performing a second etch process, the second etch process removing the one or more first dielectric layers at a second rate, the first rate being greater than the second rate.

9. The method of claim 7, wherein the providing the substrate having the dummy gate stack formed thereon with one or more first dielectric layers along sidewalls of the dummy gate stack comprises forming at least two dielectric layers, wherein the at least two dielectric layers have different etch rates.

10. The method of claim 9, wherein the at least two dielectric layers comprises a first dielectric spacer formed of a silicon oxide and a second dielectric spacer formed of a silicon nitride.

11. The method of claim 10, wherein a funnel portion the funnel-shaped opening extends about 4.5 nm to about 5 nm from an upper surface of the gate electrode.

12. The method of claim 7, wherein an upper portion the funnel-shaped opening extends about 4.5 nm to about 5 nm laterally from a lower portion of the funnel-shaped opening.

13. A method of forming a semiconductor device, the method comprising: providing a substrate; forming a gate stack on the substrate; forming a first dielectric layer on a first side of the gate stack and a second dielectric layer on a second side of the gate stack; removing the gate stack and upper portions of the first dielectric layer and the second

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dielectric layer, thereby forming a funnel-shaped opening between the first dielectric layer and the second dielectric layer and exposing the substrate; and forming a gate electrode in the funnel-shaped opening between the first dielectric layer and the second dielectric layer, wherein the funnel-shaped opening comprises a funnel slope of about 30° to about 45° relative to a major surface of the substrate.

14. The method of claim 13, further comprising forming a third dielectric layer over the substrate adjacent the first dielectric layer and the second dielectric layer.

15. The method of claim 13, wherein an upper portion the funnel-shaped opening extends about 4.5 nm to about 5 nm laterally from a lower portion of the funnel-shaped opening.

16. The method of claim 13, wherein the forming the first dielectric layer and the second dielectric layer comprises forming a first dielectric spacer adjacent the gate stack and a second dielectric spacer adjacent the first dielectric spacer, the first dielectric spacer being formed of a different material than the second dielectric spacer.

17. The method of claim 13, wherein the removing comprises: performing a first etch process having a first ratio of an etch rate of the gate stack to an etch rate of the first dielectric layer and the second dielectric layer; and performing a second etch process having a second ratio of an etch rate of the gate stack to an etch rate of the first dielectric layer and the second dielectric layer, the second ratio being greater than the first ratio.

18. The method of claim 17, wherein the first etch process comprises a dry etch process.

19. The method of claim 18, wherein the dry etch process uses a process gas of CF<sub>4</sub>, or CHF<sub>3</sub>.

20. The method of claim 17, wherein the second etch process comprises a dry etch process.

21. The method of claim 20, wherein the dry etch process uses a process gas such as Cl<sub>2</sub> or HBr.

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